

ABSTRACT

22B, 17 A torque-limiting coupling device comprises two coaxial, essentially cylindrical co-acting surface (12, 22) on two co-acting parts (10, 20) in the form of a cylindrical sleeve (20) and a cylindrical shaft (10) respectively. The sleeve and the shaft are in radially tensioned frictional engagement for transferring torque up to a torque limit that corresponds to the radial tension and
5 at which the sleeve begins to rotate relative to the shaft. The device also includes at least one pump means (3) which is adapted to be driven to pump liquid from a liquid store to a gap (B) between the co-acting surfaces (12, 22) upon relative rotation between the sleeve and the shaft. Means (8) are provided for leading liquid away from the gap (8) so as to re-establish said frictional grip subsequent to the occurrence of relative rotation between said parts. One part (10)
10 has a base which includes a surface layer (50) that defines one (12) of the co-acting surfaces and that is comprised of a material, e.g. tombak, whose plasticizing limit is considerably lower than the plasticizing limit of the material in the co-acting surface of the other part (20). The surface layer (50) includes cavities which enable the surface layer (50) to take a smaller radial thickness after plasticization to enable the parts (10, 20) to be relieved of radial load.

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